

09/785,577

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A method for reducing device discovery delays in frequency hopping based ad-hoc networks, said method comprising:

periodically interrupting an activity being executed by a device to scan at least once in a first pre-determined time period, for a second pre-determined time period, for inquiry messages from other devices;

~~returning to continue said activity for a random time period on receipt of an inquiry message from another device and, upon expiry of said random time period, processing said inquiry message in accordance with normal procedures applicable to the particular frequency hopping based ad hoc network; and~~

returning to continue said activity on expiry of said first pre-determined time period when devices to scan are found[.]; and

processing an inquiry message in accordance with normal procedures applicable to a particular frequency hopping based ad-hoc network when said devices to scan are not found.

2. (Currently Amended) The method of claim 1, wherein said second pre-determined time period appears anywhere in said first pre-determined time period with equal probability. ~~pre-determined time period for scanning is reduced by the reception, by said device, of a pre-determined number of inquiry messages from other devices.~~

3. (Currently Amended) The method of claim 1, wherein said the interrupted activity is

09/785,577

comprises one of device discovery.

4. (Currently Amended) The method of claim 1, wherein said frequency hopping based ad-hoc network is implemented under the ~~Bluetooth~~TM Bluetooth defacto standard.

5. (Currently Amended) The method of claim 4, wherein ~~said~~ the interrupted activity is comprises one of device discovery.

6. (Currently Amended) The method of claim 4, wherein ~~said periodic~~ the interruption of an activity occurs at least once every 2.56 seconds.

7. (Currently Amended) The method of claim 6, wherein ~~said random time period to continue said interrupted activity, before processing said inquiry message received from another device;~~ the first pre-determined time period is constrained to be less than or equal to 1.28 seconds.

8. (Currently Amended) A device for use in frequency hopping based ad-hoc networks including:

a processor adapted to ~~periodically~~ interrupting an activity being executed by a device to scan at least once in a first pre-determined time period, for a second pre-determined time period, for inquiry messages from other devices,

09/785,577

~~wherein said processor adapted to returning to continue said activity for a random time period on receipt of an inquiry message from another device and, upon expiry of said random time period, for processing said inquiry message in accordance with normal procedures applicable to the particular frequency hopping based ad hoc network, and~~

wherein said processor is adapted to returning to continue said activity on expiry of said first pre-determined time period when devices to scan are found[[.]], and

wherein said processor is adapted to processing an inquiry message in accordance with normal procedures applicable to a particular frequency hopping based ad-hoc network when said devices to scan are not found.

9. (Currently Amended) The device of claim 8, wherein said second pre-determined time period appears anywhere in said first pre-determined time period with equal probability. ~~pre-determined time period for scanning is reduced by the reception, by said device, of a pre-determined number of inquiry messages from other devices.~~

10. (Currently Amended) The device of claim 8, wherein said the interrupted activity is comprises one of device discovery.

11. (Currently Amended) The device of claim 8, wherein said frequency hopping based ad-hoc network is implemented under the Bluetooth™ Bluetooth defacto standard.

09/785,577

12. (Currently Amended) The device of claim 11, wherein ~~said~~ the interrupted activity is comprises one of device discovery.

13. (Currently Amended) The device of claim 11, wherein ~~said periodic~~ the interruption of an activity occurs at least once every 2.56 seconds.

14. (Currently Amended) The device of claim 13, wherein ~~said random time period to continue said interrupted activity, before processing said inquiry message received from another device, the first pre-determined time period~~ is constrained to be less than or equal to 1.28 seconds.

15. (Currently Amended) A computer program product incorporating a computer readable medium having a computer program recorded therein for use in devices for frequency hopping based ad-hoc networks, said computer program product including:

computer program code adapted to ~~periodically~~ interrupting an activity being executed by a device to scan at least once in a first pre-determined time period, for a second pre-determined time period, for inquiry messages from other devices;

computer program code adapted to ~~returning to continue said activity for a random time period on receipt of an inquiry message from another device and, upon expiry of said random time period, processing said inquiry message in accordance with normal procedures applicable to the particular frequency hopping based ad hoc network; and~~

09/785,577

computer program code adapted to returning to continue said activity on expiry of said first pre-determined time period when devices to scan are found[[.]]; and
computer program code adapted to processing an inquiry message in accordance with
normal procedures applicable to a particular frequency hopping based ad-hoc network when said
devices to scan are not found.

16. (Currently Amended) The computer program product of claim 15, wherein said second
pre-determined time period appears anywhere in said first pre-determined time period with equal
probability. pre-determined time period for scanning is reduced by the reception, by said device,
of a pre-determined number of inquiry messages from other devices.

17. (Currently Amended) The computer program product of claim 15, wherein said the
interrupted activity is comprises one of device discovery.

18. (Currently Amended) The computer program product of claim 15, wherein said frequency
hopping based ad-hoc network is implemented under the Bluetooth™ Bluetooth defacto
standard.

19. (Currently Amended) The computer program product of claim 18, wherein said the
interrupted activity is comprises one of device discovery.

09/785,577

20. (Currently Amended) The computer program product of claim 18, wherein ~~said periodic~~
the interruption of an activity occurs at least once every 2.56 seconds.

21. (Currently Amended) The computer program product of claim 20, wherein ~~said random~~
~~time period to continue said interrupted activity, before processing said inquiry message received~~
~~from another device, the first pre-determined time period~~ is constrained to be less than or equal
to 1.28 seconds.